

10 etching a part of a portion of the first etch stop layer adjacent the portion of the second
11 layer where the component is to be formed for thinning the first etch stop layer adjacent the
12 portion of the second layer where the component is to be formed to an effective stress relieving
13 depth for relieving stress in the portion of the second layer where the component is to be
14 formed.

REMARKS

Claims 1-27 are rejected under 35 USC §112, first paragraph, as being non-enabled by the specification as filed. In addition, claims 28-39 are rejected under 35 USC §112, second paragraph as being indefinite.

Applicants traverse the rejections.

Initially addressing the rejection under 35 USC §112, second paragraph, the Examiner contends that the phrase “forming a communicating bore through the first layer communicating with the first etch stop layer” of claim 28 is vague.

In response thereto, Applicants submit that the communicating bore which is formed through the first layer forms a communicating passageway with the first etch stop layer, in other words, it communicates with it. However, in order to overcome the Examiner’s rejection, Applicants have amended the claim to recite “forming a communicating bore through the first layer to the first etch stop layer ...”. In view of the revision to Claim 28, it is respectfully submitted that the claim is now clearly in compliance with 35 USC §112, second paragraph.

Since the remaining claims 29 to 39 are dependent directly on claim 28, it is respectfully submitted that once the Examiner is satisfied of the allowability of claim 28, the remaining claims 29 to 39 should likewise be deemed allowable.

Applicants will now address the rejection of claims 1 to 27 under 35 USC §112, first paragraph. The Examiner contends that the subject matter claimed in claim 1 is not described

in the specification in such a way as to enable one skilled in the art to which it pertains or with which it is most nearly connected to make and/or use the invention. The Examiner states that claim 1 recites "... prior to bonding the one of the second and third layers to the second etch stop layer ...", and that the specification only discloses the third layer bonded to the patterned second etch stop layer.

It is respectfully submitted that the Examiner's rejection of claim 1 is incorrect on this ground. Applicants contend that the specification clearly describes the subject matter of claim 1 in such a way as to enable one skilled in the art to which it pertains or with which it is most clearly connected to make and/or use the invention.

The specification clearly describes the invention at page 2, line 29 to page 3, line 9 as being a method for forming a semiconductor device which comprises first, second and third layers, with a component being formed in the second layer. The semiconductor device is also described as comprising first and second etch stop layers being located between the first and second layers, and the second and third layers, respectively. The semiconductor device at page 2, lines 32 and 33 is clearly described as having at least the second etch stop layer bonded to one of the second and third layers. The method is then described on page 3 from line 2 to line 9 as comprising the steps of:

(1) prior to bonding one of the second and third layers to the second etch stop layer, patterning the second etch stop layer to define the component in the second layer for facilitating etching of the second layer through the third layer,

(2) bonding the one of the second and third layers to the second etch stop layer,
and

(3) etching the second layer through the third layer and the second etch stop layer for forming the component in the second layer.

The specification at page 7, line 4 to line 14 describes the semiconductor device as

comprising first, second and third layers, and a component formed in the second layer. The semiconductor device is described as having first and second etch stop layers located between the first and second layers and the second and third layers, respectively. Further, the semiconductor device at lines 9 and 10 is described as comprising at least the second etch stop layer being bonded to one of the second and third layers. The description of the semiconductor device at lines 10 to 13 requires that prior to bonding the second etch stop layer to the one of the second and third layers, the second etch stop layer is to be patterned to define the component in the second layer for facilitating etching of the second layer through the third layer and the second etch stop layer. The second layer of the semiconductor device is then etched subsequent to the second etch stop layer having been bonded to the one of the first and second etch stop layers.

In the specification from page 10, line 6 to page 15, line 5 a preferred embodiment of the invention is described. At page 12, lines 13 and 14 the second etch stop layer 9 of the preferred embodiment of the invention is described as being of oxide material which is thermally grown on the upper surface 26 of the intermediate layer 5, which is the second layer, see page 10, lines 9 and 10. At page 12, lines 14 and 15 the second etch stop layer 9 is described as being patterned to define the micro-mirrors 10 and their respective connecting arms 11. At page 12, line 23 to 25 the upper layer 6, which is the third layer, see page 10, line 10, is described as being bonded to the patterned second etch stop layer 9. It is respectfully submitted that with this description of the preferred embodiment of the invention a person of ordinary skill in the art would have no difficulty in fabricating the semiconductor device with the second etch stop layer 9 thermally grown on the third upper layer 6 and after patterning of the second etch stop layer 9 bonding the second intermediate layer 5 to the second etch stop layer 9 as the other alternative method for forming the invention described at page 2, line 29 to page 3, line 9 and page 7 from line 4 to line 14. This alternative method is simply

the reverse of the preferred method. This would readily and immediately be clear to a person of ordinary skill in the art pertaining to the subject matter of the invention.

While it is incumbent on an applicant to provide an enabling description of the preferred method for carrying out the invention, it is respectfully submitted that it is not incumbent on an applicant to describe every possible method of carrying out the invention. It is respectfully submitted that what is required of an applicant is to provide a description which would enable a person of ordinary skill in the art to carry out the invention as claimed. In view of the above comments, it is respectfully submitted that the applicant has more than adequately discharged his obligation in the disclosure in the specification.

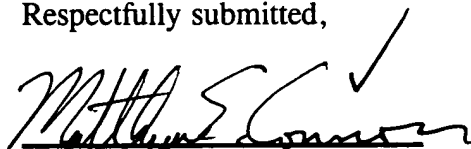
Accordingly, it is respectfully submitted that the specification clearly describes the subject matter claimed in claim 1 in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected to make and/or use the invention in accordance with 35 USC §112, first paragraph.

Since claims 2 to 27 are directly or indirectly dependent on claim 1, it is respectfully submitted that once the Examiner is satisfied of the allowability of claim 1, the remaining Claims 2 to 27 should likewise be deemed allowable

In view of the above, Applicants submit that all of the claims are in full compliance with 35 USC §112, and allowance is respectfully requested.

Clean copies of the amended page 12 and claim 28 are submitted herewith.

Respectfully submitted,



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